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A B S T R A C T  
O F T H E  
P R E M I U M S  
O F F E R E D B Y T H E  
S O C I E T Y,  
I N S T I T U T E D A T L O N D O N F O R T H E  
E N C O U R A G E M E N T O F A R T S,  
M A N U F A C T U R E S, A N D  
C O M M E R C E.



L O N D O N : P R I N T E D B Y O R D E R O F T H E  
S O C I E T Y, B Y T H O M A S W I L K I N S,  
A L D E R M A N B U R Y.

M, D C C, L X X X V I I.

SOCIETY'S OFFICE, ADELPHI, May 24, 1787.

*Ordered, that the several Candidates and Claimants to whom the Society shall adjudge Premiums or Bounties, do attend at the Society's Office in the Adelphi, on the last Tuesday in May 1788, at 12 o'Clock at noon, to receive the same, that day being appointed by the Society for the distribution of their Rewards; before which time no Premium or Bounty will be delivered.*

ADELPHI, June 1, 1787.

*The fifth Volume of the Transactions of this SOCIETY being now published, may be had by Members only, at the Society's House in the Adelphi: And by all other Persons, of the principal Booksellers in England and Wales; in which Book will be found the Particulars of each Premium, inserted in the following Abstract, and the Methods to be pursued by those who intend to become Candidates; together with many Papers communicated to the SOCIETY, in the several Branches of Arts, Manufactures, and Commerce, which are the immediate Objects of their Attention and Encouragement.*

## To the PUBLIC.

**T**HE CHIEF OBJECTS of the Attention of the SOCIETY, in the Application of their REWARDS, are all such useful Inventions, Discoveries, or Improvements, (though not mentioned in the Book of Premiums) as appear to have a Tendency to promote the Arts, Manufactures, and Commerce, of this Kingdom; and in Pursuance of this Plan, the Society have already been enabled, by the voluntary Subscriptions of its Members, and by Benefactions of the Nobility and Gentry, to expend for such useful Purposes, a Sum amounting to *upwards of Thirty Thousand Pounds.*

Whoever attentively considers the Benefits which have arisen to the Publick since the Institution of this Society, by the Introduction of new Manufactures, and the Improvements of those formerly established, will readily allow, no Money was ever more usefully expended, nor has any Nation received more real Advantage, from any Public Body whatever, than has been derived to this Country, from the Rewards bestowed by this Society; and this Observation will be confirmed by inspecting a general Account of the Effects of the Rewards bestowed by the Society, annexed to a Work in Folio, printed in 1778, entitled, “ A Register of the Premiums and Bounties given by the Society, instituted at London, for the Encouragement of Arts, Manufactures, and Commerce, from the Original Institution in 1754, to 1776, inclusive;” which Work is sent to every Member on his Election, and may



be seen by any Person, applying to the Secretary, or other Officers of the Society, at their House in the *Adelphi*.

In order still further to promote the laudable Views of this Institution, and to enable the Society to prosecute to greater Effect, the Work so successfully begun, it may not be improper to inform the Publick, by what Mode, and on what Terms Members are elected—Peers of the Realm or Lords of Parliament are, on their being proposed at any Meeting of the Society, immediately ballotted for; and the Name, with the Addition and Place of Abode of every other Person proposing to become a Member, is to be delivered to the Secretary, who is to read the same and properly insert the Name in a List of Candidates, to be hung up in the Society's Room, until the next Meeting, at which such Persons shall be ballotted for; and if two-thirds of the Members then voting, shall ballot in his Favor, he shall be deemed a perpetual Member upon payment of *Twenty Guineas* at one Payment, or a subscribing Member, upon Payment of any Sum not less than *Two Guineas* annually: every Member is equally intitled to vote, and be concerned in all the Transactions of the Society.

The Meetings of the Society are held every *Wednesday*, at Six o'Clock in the Evening, from the fourth *Wednesday* in *October*, to the first *Wednesday* in *June*. And the several Committees to whose Consideration the various Objects of the Society's Attention are referred, meet on the other Evenings in every Week during the Session.

*Premiums*



## *Premiums for Planting and Husbandry.*

### CLASS.

1. **ACORNS.** For setting ten acres, between October, 1786, and January 1787; the gold medal.
2. For five acres, the silver medal.  
*Certificates to be produced on the first Tuesday in November, 1787.*
7. *Raising Oaks.* Not fewer than five thousand, from plants, or acorns, in woods, that have been long under timber, the gold medal.
8. For three thousand; the silver medal.  
*Certificates to be produced on the first Tuesday in January, 1788.*
13. *Spanish Chestnuts.* For setting six acres, before May, 1787, the gold medal.
14. For four acres; the silver medal.
15. For two acres the silver medal.  
*Certificates to be delivered on the first Tuesday in November, 1787.*
16. *Spanish Chestnuts.* For setting six acres between the first of October 1787, and April 1788, mixed with seeds or cuttings of other trees; the gold medal.
17. For four acres; the silver medal.  
*Certificates to be produced on the first Tuesday in November, 1788.*
22. *English Elm.* For eight thousand, planted between June, 1786, and June 1787, the gold medal.
23. For five thousand; the silver medal.
24. For four thousand; the silver medal.  
*Certificates to be delivered on the first Tuesday in November, 1787.*
28. *Larch.* For planting, from June, 1786, to June, 1787, five thousand; to be between two and four years old, the gold medal.
29. For three thousand; the silver medal.  
*Certificates to be delivered on the last Tuesday in November, 1787.*
32. *Huntingdon Willow.* For three acres planted in the year 1787, at least one thousand cuttings on each acre, the gold medal.  
*Certificates to be produced on the last Tuesday in December, 1787.*
33. *Alder* For six acres, planted in the year 1786, at least one thousand on each acre; the gold medal.  
*Certificates to be produced on the last Tuesday in December, 1787.*
35. *Upland or Red Willow,* For not less than three acres, planted before the end of April, 1787, twelve hundred on each acre; the gold medal.  
*Certificates to be produced on the last Tuesday in April, 1788.*
37. *Ash.* For not less than six acres, planted in the year 1786, the plants to be two years old, and the number on each acre, at least twelve hundred; the gold medal.

38. For not less than four acres; the silver medal.

*Certificates* to be delivered on the second Tuesday in December, 1787.

41. *Ash*. For six acres planted in 1788, intermixed with seeds or cuttings of other plants; the gold medal.

\*41. For not less than four acres; the silver medal.

*Certificates* to be produced on the last Tuesday in December, 1789.

43. *Mixed Timber Trees*. For enclosing and planting, or sowing, ten acres with Forest trees for timber, between October, 1784, and May, 1786; the gold medal.

*Certificates* to be produced on the first Tuesday in November, 1788.

45. *Mulberry Cuttings*. For raising not less than three hundred Mulberry-trees from Cuttings in the year 1785; the gold medal.

*Certificates* to be produced on the first Tuesday in November, 1788.

47. *Mulberry Cuttings*. For not less than one acre of Mulberry Cuttings, planted in the year 1785, for the purpose of feeding Silk Worms; the gold medal.

*Certificates* that the plants are only three feet asunder to be produced on the first Tuesday in December, 1788.

48. *Mulberry Cuttings, or Trees*. For not fewer than three hundred planted in 1787; the gold medal.

49. For one hundred and fifty; the silver medal.

*Certificates* to be produced on the first Tuesday in November, 1789.

50. *Mulberry Trees in Hedge Rows*. For one hundred planted in 1788; ten pounds.

51. For fifty; five pounds.

*Certificates* to be produced on the first Tuesday in October, 1789.

\* \* \* *The Candidates for planting all kinds of Trees, are to certify, that the respective plantations are properly fenced and secured, and particularly to state the condition the plants were in at the time of signing such certificates.*

*Any information which the Candidates for the foregoing premiums may chuse to communicate, relative to the methods made use of in forming the plantations or promoting the growth of the several trees, or any other observations that may have occurred on the subject, will be thankfully received.*

52. *Trees for use when exposed to the weather*. For the best account, to determine which of the following trees is of the greatest utility for timber, when exposed to the weather, viz.

Larch, Black Poplar, Ash, Spanish Chestnut, Willow, Alder, Lombardy Poplar, or Beech; the gold medal.

To be produced on the second Tuesday in December, 1787.

54. *Preserving Acorns*. For the most effectual method of preserving Acorns, when sown, from being injured by mice; the gold medal.

The accounts to be produced on the last Tuesday in November, 1787.

55. For *preserving Chestnuts, and Seeds of other Forest Trees*, the silver medal.

The accounts to be produced on the last Tuesday in November, 1787.

56. *Planting boggy or morassy Soils*. For the best experiments to ascertain the advantages of planting boggy or morassy soils; the gold medal.

Cer-

*Certificates to be produced on the first Tuesday in January, 1792.*

61. *Roots of Corn.* For ascertaining the succession of the different Roots of Corn, particularly those which shoot out near the time the plants go into ear; the gold medal.

To be produced on the first Tuesday in January, 1788.

62. *Comparative culture of Wheat.* For the best experiments on the culture of Wheat, by sowing it in the common broad-cast way, by drilling it, or by dibbling; the gold medal.

The account to be produced on the first Tuesday in February, 1788.

63. *Comparative culture of Wheat.* For the best set of experiments made on eight acres, to determine the comparative advantages of cultivating Wheat, by sowing broad-cast or drilling; the gold medal.

The account to be produced on the first Tuesday in February, 1788.

65. *Comparative culture of Wheat.* For the best set of experiments made on eight acres, to determine the comparative advantage of cultivating Wheat, by broad-cast or dibbling; the gold medal.

The accounts to be produced on the first Tuesday in February, 1788.

67. *Beans and Wheat.* For planting or drilling between December 1785, and March 1786, ten acres, with Beans, and for sowing the same land with Wheat in the year 1786, ten guineas.

*Certificates to be produced on the first Tuesday in November, 1787.*

69. *Turneps.* For experiments made on six acres, to determine the comparative advantages of the drill or broad cast method in the cultivation of Turneps; the gold medal.

To be delivered on the third Tuesday in April, 1788.

71. *Green Vegetable Food.* For the best account of vegetable Food, that will most increase the milk in mares, cows, and ewes, in March and April; the gold medal.

*Certificates to be produced on the second Tuesday in November, 1787.*

73. *Turnep-rooted Cabbage.* For raising in the year 1785, not less than ten acres, and for an account of the effects on cattle or sheep, fed with it; ten guineas.

74. For not less than five acres; five guineas.

*Certificates to be produced on the last Tuesday in October, 1787.*

75. *Turnep-rooted Cabbage.* For raising in the year 1786, not less than ten acres, and for an account of the effects on cattle or sheep fed with it; the gold medal.

76. For not less than five acres; the silver medal.

*Certificates to be produced on the last Tuesday in October, 1788.*

77. *Potatoes for feeding Cattle and Sheep.* For cultivating in 1788, not less than four acres for the sole purpose of feeding Cattle and Sheep; the gold medal, or twenty guineas.

*Certificates to be produced on the second Tuesday in November, 1789.*

78. *Cultivating Roots and Herbage for feeding sheep and black cattle.* For experiments made on two acres of land, between Michaelmas, 1786, and May 1787, to ascertain which of the following plants can be secured for winter fodder, to the greatest advantage, viz.

Turnep-rooted Cabbage, Carrots, Turnep Cabbage, Parsneps, Turneps, Potatoes.



The accounts to be produced on the first Tuesday in November, 1787; the gold medal.

80. *Stocks of Bees.* For not fewer than thirty stocks of Bees, and giving an account of the manner of supporting them; the gold medal or twenty pounds.

The accounts to be delivered on the first Tuesday in November, 1789.

82. *Cultivating the true Rhubarb.* For raising in the year 1786, not less than three hundred plants of the true Rhubarb; the gold medal.

83. For two hundred plants; the silver medal.

*Certificates* to be produced on the second Tuesday in February, 1787.

86. *Rhubarb.* For Rhubarb of British growth, twenty pounds weight, the gold medal.

*Certificates*, and five pounds weight to be produced on the first Tuesday in November, 1787.

87. For ten pounds weight, the silver medal.

90. *Ascertaining the component parts of arable Land.* For the most satisfactory experiment, to ascertain the due proportion of the several component parts of Arable Land, by an accurate analysis of it; the gold medal.

The accounts to be produced on the last Tuesday in November, 1788.

95. *Improving Land lying waste.* For a method of improving soils, lying waste or uncultivated; the gold medal.

The accounts to be produced on the second Tuesday in December, 1787.

96. For the next in merit, the silver medal.

101. *Manures.* For the best account, on what soil the application of Marle, Chalk, Lime, or Clay, as manures, be most beneficial; the gold medal.

The account to be delivered on the first Tuesday in January, 1788.

104. *Manures.* For the best set of experiments, to ascertain the comparative advantage of Soot, Coal-Ashes, Wood-Ashes, Lime, or Night Soil; the gold medal.

The account to be produced on the first Tuesday in December, 1787.

106. *Course of Crops on strong Land.* For the best account, to ascertain the advantages of the following course of crops, First, Beans drilled, or planted and hoed; secondly, Wheat; the gold medal.

*Certificates* to be produced on the last Tuesday in March, 1788.

107. *Improving waste Moors.* For the improvement of not less than one hundred acres of waste Moor Land, the gold medal.

*Certificates* to be produced on the first Tuesday in February, 1788.

110. *Gaining land from the Sea.* For an account of the best method of gaining from the Sea not less than twenty acres of Land, the gold medal.

*Certificates* to be produced on the first Tuesday in October, 1787.

115. *Machin*

## A G R I C U L T U R E.

115. *Machine to reap or mow Corn.* For a Machine to reap or mow Grain by which it may be done cheaper, than by any method now practised; ten guineas.

The Machine with Certificates to be produced on the second Tuesday in December. 1787.

116. *Curing Scab in Sheep.* For discovering a method of curing the Scab in Sheep, the silver medal or ten guineas.

Certificates to be delivered on the second Tuesday in January, 1788.

117. *Destroying the Grub of the Cock-chaffer.* For discovering a method of destroying the Grub of the Cock-chaffer, the gold medal.

The accounts to be delivered on the first Tuesday in January, 1788.

*Premiums for Discoveries and Improvements in Chemistry, Dying and Mineralogy.*

118. *Kelp.* For four tons of Kelp, containing much more Alkaline Salt than any now made for sale; twenty pounds.

One hundred weight to be produced on the first Tuesday in January, 1788.

119. *Barilla.* For half a ton of merchantable Barilla, made from Spanish Kali, raised in Great Britain: the gold medal.

Twenty eight pounds, with a Certificate, to be produced on the first Tuesday in January, 1788.

120. *Dissertation on Alkali.* For the best dissertation on vegetable and mineral Alkalies; the gold medal or fifty pounds.

To be produced on the first Tuesday in March, 1788.

121. *Preserving Seeds of Vegetables.* For a method of preserving the seeds of plants fit for vegetation, the gold medal.

To be communicated on the first Tuesday in December, 1787.

122. *Destroying Smoke.* For an account of a method of destroying the smoke of fires belonging to large works; the gold medal.

To be produced on the first Tuesday in January, 1788.

123. *Candles.* For discovering a method of making Candles of Resin, fit for common use, the gold medal or thirty guineas.

To be delivered on the first Tuesday in December, 1787.

124. *Substitute for or preparation of Yeast.* For discovering a Substitute for, or preparation for Yeast, that may be preserved two months, the gold medal, or twenty pounds.

Specimens to be produced on the last Tuesday in November, 1787.

125. *Increasing Steam.* For a method of increasing the quantity, or the force of Steam, in Steam-Engines, with less fuel than is now employed; the gold medal.

To be communicated on the first Tuesday in January, 1788.

127. *Method of comparing Sweets.* For discovering a practical method of ascertaining the degrees of sweetness in Saccharine substances; the gold medal.

To be produced on the first Tuesday in January, 1788.

128. *Preventing the Dry Rot in Timber.* For discovering the cause of the Dry Rot in Timber, and disclosing a method of prevention; the gold medal.

The accounts to be produced on the second Tuesday in December, 1787.

130. *Bronze for Copper Medals.* For discovering a method of bronzing Copper Medals, equal to the French; the gold medal.

To be produced on the second Tuesday in December, 1787.

131. *Fine Bar Iron.* For making ten tons with Coak from Coak Pigs, in England or Wales, equal to Swedish or Russian Iron; the gold medal.

One hundred weight to be produced on the first Tuesday in January 1789.

*Premiums*



*Premiums for promoting the Polite Arts.*

132. *Honorary Premiums for Drawings.* For the best drawing by sons or grandsons of Peers or Peereſſes, of Great-Britain or Ireland; to be produced on the first Tuesday in March, 1788; the gold medal.

133. For the second in merit; the silver medal.

134, 135. The same premiums will be given to daughters, or grand daughters of Peers or Peereſſes, of Great-Britain or Ireland.

136. *Honorary Premiums for Drawings.* For the best drawing of any kind, by young gentlemen under the age of twenty-one To be produced on the first Tuesday in March, 1788; the gold medal.

137. For the next in merit; the silver medal.

138, 139. The same premiums will be given for drawings by young ladies.

N. B. Persons professing any branch of the Polite Arts, or the sons or daughters of such persons will not be admitted candidates in these classes.

140. *Sculpture.* For the model of the Bust of His Royal Highness the Prince of Wales, as large as the life; a silver medallion, in conformity to the will of John Stock, of Hampstead, Esq.

To be produced on the third Tuesday in November, 1787.

141. *Drawings of Outlines.* For an Outline after a group or cast in plaster of human figures, by persons under the age of sixteen, to be produced on the last Tuesday in November, 1787; the greater silver pallet.

142. For the next in merit; the lesser silver pallet.

143. *Drawings of Machines.* For the best drawing by persons under the age of twenty-one years, of a Crane by Mr Bunce, in the Society's Repository; the greater silver pallet; to be produced on the third Tuesday in November, 1787.

144. *Drawings of Landscapes.* For the best drawing after nature, by persons under twenty one years of age, to be produced on the third Tuesday in November, 1787; the greater silver pallet.

145. For the next in merit; the lesser silver pallet.

146. *Historical Drawings.* For the best original Historical Drawing, of five or more human figures; to be produced on the third Tuesday in November, 1787; the gold pallet.

147. For the next in merit; the greater silver pallet.

148. *Engraving in the Line Manner.* For the best engraved Plate in the Line Manner, twenty inches by sixteen, containing three human figures, the gold pallet and twenty-five guineas.

To be produced on the first Tuesday in February, 1789.

150. *Surveys of Counties.* For an accurate Survey of any County in England or Wales, the gold medal.

To be begun after the first of June 1787, and produced on the last Tuesday in January, 1792.

*Premiums for encouraging and improving Manufactures.*

151. *Silk.* For five pounds of Silk, produced by one person in England, in the year 1787; the gold medal.

One pound, with Certificates, to be delivered to the Society on the first Tuesday in January, 1788.

152. For two pounds; the silver medal.

153. *Machine for carding Silk.* For a machine for carding waste Silk; to be produced on the first Tuesday in November, 1787; the gold medal, or twenty pounds.

154. *Weaving Fishing Nets.* For the best specimen of netting, for Fishing Nets, twenty yards long, and six feet deep, woven in a machine; to be produced on the second Tuesday in January 1788; twenty guineas.

155. *Paper for Copper Plates.* For establishing in England or Wales, a manufacture of paper, equal to the paper imported from France, proper for impressions of engraved copper-plates; the gold medal.

One ream of the dimensions of the French Colombier, to be produced on the first Tuesday in November, 1787.

156. *Cloth from Hop-stalks, or Binds.* For not less than twenty-five yards, made, in England, the gold medal, or twenty pounds; to be produced on the second Tuesday in December, 1787.

159. *Paper from raw Vegetables.* For ten reams of useful Paper from vegetable substances that have not been previously made into cloth; ten guineas.

One ream and Certificates to be produced on the first Tuesday in November, 1788.

*Premiums for Inventions in Mechanicks;*

159. *Transit Instrument.* For a cheap and portable Transit Instrument, for the purposes of finding the latitudes and longitudes of places; the gold medal, or twenty guineas; to be produced on the last Tuesday in January, 1788.

160. *Gun Harpoon.* For every Whale taken by the Gun Harpoon; to the person who first strikes such fish therewith: two guineas.

*Certificates of the taking such Whales in the year 1787: to be delivered on the last Tuesday in December, 1787.*

161. *Gun for throwing Harpoons.* To the person who shall produce the best gun for throwing Harpoons; the silver medal, or ten guineas.

To be delivered on the first Tuesday in December, 1787.

162. *Harpoon to be thrown by a Gun.* To the person who shall produce the best Harpoon to be thrown by a gun, the silver medal, or ten guineas.

To be delivered on the first Tuesday in December, 1787.

163. *Cross bow for throwing Harpoons.* To the person who shall produce the best cross-bow for throwing Harpoons; the silver medal, or ten guineas.

To be delivered on the first Tuesday in December, 1787.

164. *Cross-bow Harpoon.* For every Whale taken by a Harpoon shot from a cross-bow, to the person who first strikes such fish therewith; two guineas.

*Certificates of the taking such Whales in the year 1787, to be delivered on the last Tuesday in December, 1787.*

165. *Machine for transporting Timber.* For a model of the best Machine for transporting timber, on soft or clayey roads: to be sent in on the last Tuesday in November, 1787; twenty guineas.

166. *Improvement of the Hand Ventilator.* For a portable Ventilator, to be worked by hand, better than any now in use; the gold medal, or twenty guineas.

To be produced on the last Tuesday in February, 1788.

167. *Cranes for Wharfs.* For a model of a Crane for Wharfs, superior to any in use; the gold medal, or twenty guineas.

To be produced on the first Tuesday in February, 1788.

168. *Horizontal Windmill.* To the person who shall produce a model of a Horizontal Windmill on a scale not less than one inch to a foot, superior to any in use; the gold medal, or twenty guineas.

To be produced on the first Tuesday in February, 1788.

169. *Handmill.* For the best constructed Handmill for general purposes; the silver medal, or ten guineas.

To be produced on the last Tuesday in December, 1787.

170. *Machine*



170. *Machine for raising Ore.* To the person who shall invent a machine and produce a model for raising Ore, &c. from mines, at a less expence than any in use; the gold medal, or twenty guineas.

To be produced on the second Tuesday in February, 1788.

171. *Sluices for scouring Channels.* To the person who shall invent a Sluice to be easily disposed so as to scour a Channel increasing in width equal to an angle of  $45^{\circ}$ ; twenty guineas.

To be produced on the second Tuesday in February, 1788.

172. *Machine for clearing Rivers.* For the best model of a Machine, superior to any now in use, for clearing navigable rivers from Weeds, at the least expence; ten guineas.

To be produced on the first Tuesday in February, 1788.

173. *Securing Buildings from Fire.* For an effectual method of preventing accidental Fires in buildings; twenty guineas.

To be produced on the second Tuesday in February, 1788.

*Premiums offered for the Advantage of the British Colonies.*

173. *Nutmegs.* For five pounds weight of Nutmegs, the growth of his Majesty's dominions in the West Indies, the gold medal, or one hundred pounds.

*Certificates* to be produced on the first Tuesday in December, 1788.

175, 176. *Bread Fruit Tree.* For the greatest number of plants of one or both species of the Bread Fruit Tree, in a growing state, not less than three of either species; the gold medal.

To be produced before the fifteenth of August, 1788.

179. *Oil from Cotton Seed.* For one ton of Oil and five hundred weight of Cake from the Seed of Cotton; the gold medal.

*Certificates* to be produced, with two gallons of Oil and two dozen of cakes, on the last Tuesday in November, 1787.

183. *Spirit from the Pulp of the Coffee Berry.* For distilling thirty gallons of spirit, from the Pulp of the Coffee Berry, and producing one gallon of the spirit, the gold medal.

184. For fifteen gallons the silver medal

*Certificates* to be delivered on the first Tuesday in January, 1788.

185. *Senna.* For two hundred weight, imported in 1786, the growth of any of the British islands in the West Indies, the gold medal.

*Certificates* to be produced on the first Tuesday in February, 1788.

186. *Kali for Barilla.* For cultivating five acres of land with Spanish Kali for making Barilla, the gold medal.

For three acres, the silver medal.

*Certificates* to be produced on the second Tuesday in November, 1789.

\*\*\* It is required, that the matters for which Premiums are offered, be delivered in without names, or any intimation to whom they belong, that each particular thing be marked in what manner each claimant thinks fit, such claimant sending with it a paper sealed up, having on the outside a corresponding mark and on the inside the claimant's name and address.

COPIES OF THE

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his family's dominion in the West Indies, the gold mine, or one of the world's great gold mines.

1. The first of these is the fact that the system is not a simple one. It is a complex one, and it is not clear that the system is a simple one. It is a complex one, and it is not clear that the system is a simple one.

was a fine cake from the State of Cotton, the gold medal.

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12. Not known as the liver model.

1. The first of these is the fact that the weight of the body is not constant, but varies with the position of the body in the fluid. This is due to the fact that the weight of the body is the weight of the body in air minus the weight of the fluid displaced by the body. The weight of the fluid displaced is proportional to the volume of the body submerged, and the volume of the body submerged is proportional to the depth of the body in the fluid. Therefore, the weight of the body is a function of the depth of the body in the fluid.

1. The first of these is the fact that the  
2. second is the fact that the  
3. third is the fact that the

It is required, that the answers for which Prizes are offered, be sent to the Secretary of the Society, on or before the 1st of January, 1841.

[illegible]

THE UNIVERSITY OF CHICAGO

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